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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/672,697	KOMARLA ET AL.	
	Examiner	Art Unit	
	Gabriel L. Chu	2114	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 December 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *26 September 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. **Claims 1-28 rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-52 of U.S. Patent No. 6622260 in view of US 6971044 to Geng et al., US 20040054780 to Romero.** See below for bases for combination.

Claims 1-28 of the instant application are anticipated by claims 1-52 of U.S. Patent No. 6622260 in that claims 1-52 of U.S. Patent No. 6622260 contain all of the limitations of claims 1-28 of the instant application. Claims 1-28 of the instant application therefore are not patently distinct from the earlier patent claims, and as such are unpatentable for obvious-type double patenting. (In re Goodman (CAFC) 29 USPQ2d

2010). While limitations of the claims of U.S. Patent No. 6622260 may be broader than the claims of the instant application, the language and the disclosure of U.S. Patent No. 6622260 indicate that the limitation of claims of the instant application are merely a subset of U.S. Patent No. 6622260. These differences are not sufficient to render the claims patentably distinct. Georgia-Pacific Corp. v. United States Gympsum Co., 195 F.3d 1322, 1325, 52 USPQ2d 1590, 1593 (Fed. Cir. 1999).

3. **Claims 1-28 rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-18 of U.S. Patent No. 6675324 in view of US 6971044 to Geng et al., US 20040054780 to Romero.** See below for bases for combination.

Claims 1-28 of the instant application are anticipated by claims 1-18 of U.S. Patent No. 6675324 in that claims 1-18 of U.S. Patent No. 6675324 contain all of the limitations of claims of the instant application. Claims 1-28 of the instant application therefore are not patently distinct from the earlier patent claims, and as such are unpatentable for obvious-type double patenting. (In re Goodman (CAFC) 29 USPQ2d 2010). While limitations of the claims of U.S. Patent No. 6675324 may be broader than the claims of the instant application, the language and the disclosure of U.S. Patent No. 6675324 indicate that the limitation of claims of the instant application are merely a subset of U.S. Patent No. 6675324. These differences are not sufficient to render the claims patentably distinct. Georgia-Pacific Corp. v. United States Gympsum Co., 195 F.3d 1322, 1325, 52 USPQ2d 1590, 1593 (Fed. Cir. 1999).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. **Claims 1-5, 7-12, 14 rejected under 35 U.S.C. 103(a) as being unpatentable over US 6622260 to Marisetty et al. in view of US 6971044 to Geng et al.** Notably, Marisetty qualifies as prior art unit 102(a) in addition to 102(e).

6. Referring to claim 1, 8, Marisetty discloses responsive to a platform error at a local node of a platform, performing error recovery at a processor abstraction layer (PAL); if the platform error is not resolved at the PAL, performing error recovery at a system abstraction layer (SAL) (See figure 4).

Although Marisetty does not specifically disclose *if the platform error is not resolved at the PAL determining if there is a peer node with an available network interface card (NIC), and if there is a peer node with an available NIC, sending a media access control (MAC) address of the local node to the peer node so that the peer node can handle operations for the local node, and disabling the MAC address of the local node; if the platform error is resolved by the SAL, enabling the local node with the MAC address of the local node, the local node to resume normal operation*, performing MAC address failover for a failed node is known in the art, as is failing back to a recovered failed node in response to the recovery of that failed node. An example of this is shown by Geng, from line 61 of column 19, "When in filtered mode, there will be one externally visible MAC address to which external nodes transmit packets for a set of virtual

network interfaces. If that adapter goes down, then not only do the virtual network interfaces have to fail over to the other control node, but the MAC address must fail over too so that external nodes can continue to send packets to the MAC address already in the ARP caches. Under one embodiment of the invention, when a failed control node recovers, a single MAC address is manipulated and the MAC address does not have to be remapped on recovery." Further, from line 45 of column 20, "When receive has failed over and the failed control node recovers, only transmissions will be moved over to the recovered control node. Thus, the algorithm for recovery on virtual network interfaces is to always move transmissions to the recovered control node and leave receive processing where it is." Further, from line 46 of column 10 of Geng, "The RCLAN layer 315 is responsible for handling the redundancy, fail-over and load balancing logic of the redundant interconnect NICs 107."A person of ordinary skill in the art at the time of the invention could have been motivated to fail over a MAC address because, as shown by Marisetty, an attempt to correct may fail and while failed, a resource is not available, and further, Geng shows high availability by providing such failover.

7. Referring to claim 2, 9, Marisetty in view of Geng discloses if the SAL does not resolve the platform error, further comprising: performing error recovery at the operating system (OS) level (Marisetty, figure 4); and

if the platform error is resolved at the OS level, enabling the local node with the MAC address of the local node, the local node to resume normal operation (Marisetty, recovery and failing back.).

8. Referring to claim 3, 10, Marisetty in view of Geng discloses if the platform error is not resolved at the OS level, further comprising: resetting the local node (Marisetty, figure 4, "reset". Geng, "recovery".); and

"after" re-booting the local node, obtaining "state information" from the operating system (For example, from line 64 of Geng, "All the connection pairs established by the node persist as long as the operating system remains up. Establishment of a connection pair to simulate an Ethernet connection is intended to be analogous to, and as persistent as, physically plugging in a cable between network interface cards. If a node's defined configuration changes while its operating system is running, then applicable redundant Virtual Interface connection pairs will be established or discarded at the time of the change.").

9. Referring to claim 4, 11, Marisetty in view of Geng discloses enabling the local node with the MAC address of the local node, the local node to resume normal operation (Marisetty, recovery and failing back.).

10. Referring to claim 5, 12, Marisetty in view of Geng discloses extracting an error log; and generating an event log (From line 51 of column 6 of Marisetty, "The log that the error handling routine of SAL 202 generates is in a predetermined format and may be accessed by the OS 203 or other diagnostic software. The error handling routine of SAL 202 logs processor and platform error information, saves processor and platform state information, performs hardware specific corrections, clears the error log and re-enables future information collection, halts the processor or platform as necessary, and handles multi processor situations. The processor and platform error information is

logged in either a CMC log or MCA log. The error handling routine of SAL 202 can use the PAL 201 set of procedures to obtain additional information from the processor or platform. CMC logs store information about errors corrected by hardware or firmware. For corrected errors, intervention by the OS 203 is not required for error handling, only PAL and SAL will do most of the work and return back to the interrupted processes, but OS 203 can be notified of the corrected error through a low priority corrected machine check (CMC) signal or event. The system software can generate the CMC event by polling for a flag or by programming the hardware to generate an interrupt.").

11. Referring to claim 7, 14, Marisetty in view of Geng discloses the peer node utilizes a back-up NIC as the available NIC (From line 46 of column 10 of Geng, "The RCLAN layer 315 is responsible for handling the redundancy, fail-over and load balancing logic of the redundant interconnect NICs 107.").

12. Claims 6, 13 rejected under 35 U.S.C. 103(a) as being unpatentable over US 6622260 to Marisetty et al. in view of US 6971044 to Geng et al. as applied to claim 1, 8 above, and further in view of US 20040054780 to Romero.

13. Referring to claim 6, 13, although Marisetty in view of Geng discloses does not specifically disclose that the computing architecture may be implemented using blade servers as the nodes, this is well known in the art. An example of this is shown by Romero from paragraph 9, "Like more traditional clustered servers, blade servers can also be managed to include load balancing and failover capabilities. Load balancing is dividing the amount of work that a blade server has to do between two or more blade servers so that more work gets done in the same amount of time and, in general, all

users get served faster. Load balancing may be implemented with hardware, software, or a combination of both. Typically, load balancing is the main reason for blade server clustering. Failover is a backup operational mode in which the functions of a primary blade server are assumed by a secondary blade server when the primary blade server becomes unavailable through either future or scheduled down time." A person of ordinary skill in the art at the time of the invention could have been motivated to use a blade architecture because, as from paragraph 8 of Romero, "A blade server is sometimes referred to as a "high-density server" and is typically used in a clustering of servers that are dedicated to a single task, such as file sharing, web page serving and caching, SSL encrypting or web communication, transcoding of web page content for smaller displays, and audio and video content streaming. A blade server usually comes with an operating system and is normally dedicated to a single application or application component. The storage required by the blades could be embedded in the blade, or available externally via standard connectivity mechanisms such as Storage Area Networks (SAN), or Network Attached Storage (NAS). The operating system and applications required to operate the blades can be loaded from the storage device(s) available to the blades.", and provides for load balancing, which is also shown in Geng, and provides an environment for failover, also shown in Geng.

14. **Claims 15-28 rejected under 35 U.S.C. 103(a) as being unpatentable over US 6622260 to Marisetty et al. in view of US 6971044 to Geng et al. and US 20040054780 to Romero.**

15. Referring to claim 15, 16, 22, 23, Marisetty discloses a processor; a memory coupled to the processor; wherein responsive to a platform error at the node, error recovery is performed at a processor abstraction layer (PAL); error recovery is further performed at a system abstraction layer (SAL) (See figure 4).

Although Marisetty does not specifically disclose *a network interface card (NIC) coupled to the processor to provide for network communications to a peer node* and *if the platform error is not resolved at the PAL, a media access control (MAC) address of the server blade is sent to the peer server blade so that the peer server blade can handle operations for the server blade, and the MAC address of the server blade is disabled* and *if the platform error is resolved by the SAL, the server blade is enabled with the MAC address of the server blade, and the server blade resumes normal operation*, performing MAC address failover for a failed node is known in the art, as is failing back to a recovered failed node in response to the recovery of that failed node. An example of this is shown by Geng, from line 61 of column 19, "When in filtered mode, there will be one externally visible MAC address to which external nodes transmit packets for a set of virtual network interfaces. If that adapter goes down, then not only do the virtual network interfaces have to fail over to the other control node, but the MAC address must fail over too so that external nodes can continue to send packets to the MAC address already in the ARP caches. Under one embodiment of the invention, when a failed control node recovers, a single MAC address is manipulated and the MAC address does not have to be remapped on recovery." Further, from line 45 of column 20, "When receive has failed over and the failed control node recovers, only

transmissions will be moved over to the recovered control node. Thus, the algorithm for recovery on virtual network interfaces is to always move transmissions to the recovered control node and leave receive processing where it is." Further, from line 46 of column 10 of Geng, "The RCLAN layer 315 is responsible for handling the redundancy, fail-over and load balancing logic of the redundant interconnect NICs 107."A person of ordinary skill in the art at the time of the invention could have been motivated to fail over a MAC address because, as shown by Marisetty, an attempt to correct may fail and while failed, a resource is not available, and further, Geng shows high availability by providing such failover.

Although Marisetty in view of Geng does not disclose that the computing architecture may be implemented using blade servers as the nodes, this is well known in the art. An example of this is shown by Romero from paragraph 9, "Like more traditional clustered servers, blade servers can also be managed to include load balancing and failover capabilities. Load balancing is dividing the amount of work that a blade server has to do between two or more blade servers so that more work gets done in the same amount of time and, in general, all users get served faster. Load balancing may be implemented with hardware, software, or a combination of both. Typically, load balancing is the main reason for blade server clustering. Failover is a backup operational mode in which the functions of a primary blade server are assumed by a secondary blade server when the primary blade server becomes unavailable through either future or scheduled down time." A person of ordinary skill in the art at the time of the invention could have been motivated to use a blade architecture because, as from

paragraph 8 of Romero, "A blade server is sometimes referred to as a "high-density server" and is typically used in a clustering of servers that are dedicated to a single task, such as file sharing, web page serving and caching, SSL encrypting or web communication, transcoding of web page content for smaller displays, and audio and video content streaming. A blade server usually comes with an operating system and is normally dedicated to a single application or application component. The storage required by the blades could be embedded in the blade, or available externally via standard connectivity mechanisms such as Storage Area Networks (SAN), or Network Attached Storage (NAS). The operating system and applications required to operate the blades can be loaded from the storage device(s) available to the blades.", and provides for load balancing, which is also shown in Geng, and provides an environment for failover, also shown in Geng.

16. Referring to claim 17, 24, Marisetty in view of Geng and Romero discloses if the SAL does not resolve the platform error, further comprising: performing error recovery at the operating system (OS) level (Marisetty, figure 4); and

if the platform error is resolved at the OS level, enabling the local node with the MAC address of the local node, the local node to resume normal operation (Marisetty, recovery and failing back.).

17. Referring to claim 18, 25, Marisetty in view of Geng and Romero discloses if the platform error is not resolved at the OS level, further comprising: resetting the local node (Marisetty, figure 4, "reset". Geng, "recovery".); and

"after" re-booting the local node, obtaining "state information" from the operating

system (For example, from line 64 of Geng, "All the connection pairs established by the node persist as long as the operating system remains up. Establishment of a connection pair to simulate an Ethernet connection is intended to be analogous to, and as persistent as, physically plugging in a cable between network interface cards. If a node's defined configuration changes while its operating system is running, then applicable redundant Virtual Interface connection pairs will be established or discarded at the time of the change.").

18. Referring to claim 19, 26, Marisetty in view of Geng and Romero discloses enabling the local node with the MAC address of the local node, the local node to resume normal operation (Marisetty, recovery and failing back.).

19. Referring to claim 20, 27, Marisetty in view of Geng and Romero discloses extracting an error log; and generating an event log (From line 51 of column 6 of Marisetty, "The log that the error handling routine of SAL 202 generates is in a predetermined format and may be accessed by the OS 203 or other diagnostic software. The error handling routine of SAL 202 logs processor and platform error information, saves processor and platform state information, performs hardware specific corrections, clears the error log and re-enables future information collection, halts the processor or platform as necessary, and handles multi processor situations. The processor and platform error information is logged in either a CMC log or MCA log. The error handling routine of SAL 202 can use the PAL 201 set of procedures to obtain additional information from the processor or platform. CMC logs store information about errors corrected by hardware or firmware. For corrected errors, intervention by the OS

203 is not required for error handling, only PAL and SAL will do most of the work and return back to the interrupted processes, but OS 203 can be notified of the corrected error through a low priority corrected machine check (CMC) signal or event. The system software can generate the CMC event by polling for a flag or by programming the hardware to generate an interrupt.").

20. Referring to claim 21, 28, Marisetty in view of Geng and Romero discloses the peer node utilizes a back-up NIC as the available NIC (From line 46 of column 10 of Geng, "The RCLAN layer 315 is responsible for handling the redundancy, fail-over and load balancing logic of the redundant interconnect NICs 107.").

21. **Claims 1-5, 7-12, 14 rejected under 35 U.S.C. 103(a) as being unpatentable over US 6675324 to Marisetty et al. in view of US 6971044 to Geng et al.** Notably, Marisetty qualifies as prior art unit 102(a) in addition to 102(e).

22. Referring to claim 1, 8, Marisetty discloses responsive to a platform error at a local node of a platform, performing error recovery at a processor abstraction layer (PAL); if the platform error is not resolved at the PAL, performing error recovery at a system abstraction layer (SAL) (See, for example, claim 1.).

Although Marisetty does not specifically disclose *if the platform error is not resolved at the PAL determining if there is a peer node with an available network interface card (NIC), and if there is a peer node with an available NIC, sending a media access control (MAC) address of the local node to the peer node so that the peer node can handle operations for the local node, and disabling the MAC address of the local node; if the platform error is resolved by the SAL, enabling the local node with the MAC*

address of the local node, the local node to resume normal operation, performing MAC address failover for a failed node is known in the art, as is failing back to a recovered failed node in response to the recovery of that failed node. An example of this is shown by Geng, from line 61 of column 19, "When in filtered mode, there will be one externally visible MAC address to which external nodes transmit packets for a set of virtual network interfaces. If that adapter goes down, then not only do the virtual network interfaces have to fail over to the other control node, but the MAC address must fail over too so that external nodes can continue to send packets to the MAC address already in the ARP caches. Under one embodiment of the invention, when a failed control node recovers, a single MAC address is manipulated and the MAC address does not have to be remapped on recovery." Further, from line 45 of column 20, "When receive has failed over and the failed control node recovers, only transmissions will be moved over to the recovered control node. Thus, the algorithm for recovery on virtual network interfaces is to always move transmissions to the recovered control node and leave receive processing where it is." Further, from line 46 of column 10 of Geng, "The RCLAN layer 315 is responsible for handling the redundancy, fail-over and load balancing logic of the redundant interconnect NICs 107."A person of ordinary skill in the art at the time of the invention could have been motivated to fail over a MAC address because, as shown by Marisetty, an attempt to correct may fail and while failed, a resource is not available, and further, Geng shows high availability by providing such failover.

23. Referring to claim 2, 9, Marisetty in view of Geng discloses if the SAL does not resolve the platform error, further comprising: performing error recovery at the operating

system (OS) level (Marisetty); and

if the platform error is resolved at the OS level, enabling the local node with the MAC address of the local node, the local node to resume normal operation (Marisetty, recovery and failing back.).

24. Referring to claim 3, 10, Marisetty in view of Geng discloses if the platform error is not resolved at the OS level, further comprising: resetting the local node (Marisetty, figure 4, "reset". Geng, "recovery".); and

"after" re-booting the local node, obtaining "state information" from the operating system (For example, from line 64 of Geng, "All the connection pairs established by the node persist as long as the operating system remains up. Establishment of a connection pair to simulate an Ethernet connection is intended to be analogous to, and as persistent as, physically plugging in a cable between network interface cards. If a node's defined configuration changes while its operating system is running, then applicable redundant Virtual Interface connection pairs will be established or discarded at the time of the change.").

25. Referring to claim 4, 11, Marisetty in view of Geng discloses enabling the local node with the MAC address of the local node, the local node to resume normal operation (Marisetty, recovery and failing back.).

26. Referring to claim 5, 12, Marisetty in view of Geng discloses extracting an error log; and generating an event log (From column 4, "If the PAL routine can not fully handle the error, the processor implements a SAL 102 routine or a OS 103 routine. Even where the processor may correct or handle the error using the PAL 101 routine, it

may make error information available to other layers. The PAL can create an error log regarding its error handling and provide the error log to other layers. PAL 101 contains code or routines for error handling. The SAL 102 includes routines that can access PAL 101 routines. SAL 102 can be a platform specific component provided by vendors. SAL 102 is the firmware layer that isolates the OS 103 and other higher level software from implementation differences in the platform. SAL 102 can be used to abstract system implementation differences in IA-64 platforms and may include the basic IA-32 BIOS and additional IA-64 routines to support the IA-64 platform. SAL 102 can create an error log and may request PAL 101 to sent its error log to SAL 102. SAL 102 contains code or routines for error handling.").

27. Referring to claim 7, 14, Marisetty in view of Geng discloses the peer node utilizes a back-up NIC as the available NIC (From line 46 of column 10 of Geng, "The RCLAN layer 315 is responsible for handling the redundancy, fail-over and load balancing logic of the redundant interconnect NICs 107.").

28. Claims 6, 13 rejected under 35 U.S.C. 103(a) as being unpatentable over US 6675324 to Marisetty et al. in view of US 6971044 to Geng et al. as applied to claim 1, 8 above, and further in view of US 20040054780 to Romero.

29. Referring to claim 6, 13, although Marisetty in view of Geng discloses does not specifically disclose that the computing architecture may be implemented using blade servers as the nodes, this is well known in the art. An example of this is shown by Romero from paragraph 9, "Like more traditional clustered servers, blade servers can also be managed to include load balancing and failover capabilities. Load balancing is

dividing the amount of work that a blade server has to do between two or more blade servers so that more work gets done in the same amount of time and, in general, all users get served faster. Load balancing may be implemented with hardware, software, or a combination of both. Typically, load balancing is the main reason for blade server clustering. Failover is a backup operational mode in which the functions of a primary blade server are assumed by a secondary blade server when the primary blade server becomes unavailable through either future or scheduled down time." A person of ordinary skill in the art at the time of the invention could have been motivated to use a blade architecture because, as from paragraph 8 of Romero, "A blade server is sometimes referred to as a "high-density server" and is typically used in a clustering of servers that are dedicated to a single task, such as file sharing, web page serving and caching, SSL encrypting or web communication, transcoding of web page content for smaller displays, and audio and video content streaming. A blade server usually comes with an operating system and is normally dedicated to a single application or application component. The storage required by the blades could be embedded in the blade, or available externally via standard connectivity mechanisms such as Storage Area Networks (SAN), or Network Attached Storage (NAS). The operating system and applications required to operate the blades can be loaded from the storage device(s) available to the blades.", and provides for load balancing, which is also shown in Geng, and provides an environment for failover, also shown in Geng.

30. **Claims 15-28 rejected under 35 U.S.C. 103(a) as being unpatentable over US 6675324 to Marisetty et al. in view of US 6971044 to Geng et al. and US 20040054780 to Romero.**

31. Referring to claim 15, 16, 22, 23, Marisetty discloses a processor; a memory coupled to the processor; wherein responsive to a platform error at the node, error recovery is performed at a processor abstraction layer (PAL); error recovery is further performed at a system abstraction layer (SAL) (See, for example, claim 1.).

Although Marisetty does not specifically disclose *a network interface card (NIC) coupled to the processor to provide for network communications to a peer node* and *if the platform error is not resolved at the PAL, a media access control (MAC) address of the server blade is sent to the peer server blade so that the peer server blade can handle operations for the server blade, and the MAC address of the server blade is disabled* and *if the platform error is resolved by the SAL, the server blade is enabled with the MAC address of the server blade, and the server blade resumes normal operation*, performing MAC address failover for a failed node is known in the art, as is failing back to a recovered failed node in response to the recovery of that failed node. An example of this is shown by Geng, from line 61 of column 19, "When in filtered mode, there will be one externally visible MAC address to which external nodes transmit packets for a set of virtual network interfaces. If that adapter goes down, then not only do the virtual network interfaces have to fail over to the other control node, but the MAC address must fail over too so that external nodes can continue to send packets to the MAC address already in the ARP caches. Under one embodiment of the invention,

when a failed control node recovers, a single MAC address is manipulated and the MAC address does not have to be remapped on recovery." Further, from line 45 of column 20, "When receive has failed over and the failed control node recovers, only transmissions will be moved over to the recovered control node. Thus, the algorithm for recovery on virtual network interfaces is to always move transmissions to the recovered control node and leave receive processing where it is." Further, from line 46 of column 10 of Geng, "The RCLAN layer 315 is responsible for handling the redundancy, fail-over and load balancing logic of the redundant interconnect NICs 107."A person of ordinary skill in the art at the time of the invention could have been motivated to fail over a MAC address because, as shown by Marisetty, an attempt to correct may fail and while failed, a resource is not available, and further, Geng shows high availability by providing such failover.

Although Marisetty in view of Geng does not disclose that the computing architecture may be implemented using blade servers as the nodes, this is well known in the art. An example of this is shown by Romero from paragraph 9, "Like more traditional clustered servers, blade servers can also be managed to include load balancing and failover capabilities. Load balancing is dividing the amount of work that a blade server has to do between two or more blade servers so that more work gets done in the same amount of time and, in general, all users get served faster. Load balancing may be implemented with hardware, software, or a combination of both. Typically, load balancing is the main reason for blade server clustering. Failover is a backup operational mode in which the functions of a primary blade server are assumed by a

secondary blade server when the primary blade server becomes unavailable through either future or scheduled down time." A person of ordinary skill in the art at the time of the invention could have been motivated to use a blade architecture because, as from paragraph 8 of Romero, "A blade server is sometimes referred to as a "high-density server" and is typically used in a clustering of servers that are dedicated to a single task, such as file sharing, web page serving and caching, SSL encrypting or web communication, transcoding of web page content for smaller displays, and audio and video content streaming. A blade server usually comes with an operating system and is normally dedicated to a single application or application component. The storage required by the blades could be embedded in the blade, or available externally via standard connectivity mechanisms such as Storage Area Networks (SAN), or Network Attached Storage (NAS). The operating system and applications required to operate the blades can be loaded from the storage device(s) available to the blades.", and provides for load balancing, which is also shown in Geng, and provides an environment for failover, also shown in Geng.

32. Referring to claim 17, 24, Marisetty in view of Geng and Romero discloses if the SAL does not resolve the platform error, further comprising: performing error recovery at the operating system (OS) level (Marisetty); and

if the platform error is resolved at the OS level, enabling the local node with the MAC address of the local node, the local node to resume normal operation (Marisetty, recovery and failing back.).

33. Referring to claim 18, 25, Marisetty in view of Geng and Romero discloses if the platform error is not resolved at the OS level, further comprising: resetting the local node (Marisetty. Geng, "recovery".); and

"after" re-booting the local node, obtaining "state information" from the operating system (For example, from line 64 of Geng, "All the connection pairs established by the node persist as long as the operating system remains up. Establishment of a connection pair to simulate an Ethernet connection is intended to be analogous to, and as persistent as, physically plugging in a cable between network interface cards. If a node's defined configuration changes while its operating system is running, then applicable redundant Virtual Interface connection pairs will be established or discarded at the time of the change.").

34. Referring to claim 19, 26, Marisetty in view of Geng and Romero discloses enabling the local node with the MAC address of the local node, the local node to resume normal operation (Marisetty, recovery and failing back.).

35. Referring to claim 20, 27, Marisetty in view of Geng and Romero discloses extracting an error log; and generating an event log (From column 4, "If the PAL routine can not fully handle the error, the processor implements a SAL 102 routine or a OS 103 routine. Even where the processor may correct or handle the error using the PAL 101 routine, it may make error information available to other layers. The PAL can create an error log regarding its error handling and provide the error log to other layers. PAL 101 contains code or routines for error handling. The SAL 102 includes routines that can access PAL 101 routines. SAL 102 can be a platform specific component provided by

vendors. SAL 102 is the firmware layer that isolates the OS 103 and other higher level software from implementation differences in the platform. SAL 102 can be used to abstract system implementation differences in IA-64 platforms and may include the basic IA-32 BIOS and additional IA-64 routines to support the IA-64 platform. SAL 102 can create an error log and may request PAL 101 to sent its error log to SAL 102. SAL 102 contains code or routines for error handling.").

36. Referring to claim 21, 28, Marisetty in view of Geng and Romero discloses the peer node utilizes a back-up NIC as the available NIC (From line 46 of column 10 of Geng, "The RCLAN layer 315 is responsible for handling the redundancy, fail-over and load balancing logic of the redundant interconnect NICs 107.").

Response to Amendment

37. The affidavit filed on 3 December 2007 under 37 CFR 1.131 has been considered but is ineffective to overcome the previously applied Marisetty reference, but also the newly applied Marisetty reference.

38. Affidavits require the signature of ALL inventors. Only one inventor (Zimmer) of the two (2) has signed.

39. The evidence submitted is insufficient to establish diligence from a date prior to the date of reduction to practice of the Marisetty references to either a constructive reduction to practice or an actual reduction to practice. Applicant merely indicates that the application was "prepared with due diligence", but provides no evidence to support this mere pleading. From MPEP 2138.06 "Reasonable Diligence" (with emphasis), "THE ENTIRE PERIOD DURING WHICH DILI-GENCE IS REQUIRED MUST BE

ACCOUNTED FOR BY EITHER AFFIRMATIVE ACTS OR ACCEPTABLE EXCUSES

An applicant must account for the entire period during which diligence is required. Gould v. Schawlow, 363 F.2d 908, 919, 150 USPQ 634, 643 (CCPA 1966) (Merely statingthat there were no weeks or months that the invention was not worked on is not enough.); In re Harry, 333 F.2d 920, 923, 142 USPQ 164, 166 (CCPA 1964) (statement that the subject matter "was diligently reduced to practice" is not a showing but **a mere pleading**). **A 2-day period lacking activity has been held to be fatal.** In re Mulder, 716 F.2d 1542, 1545, 219 USPQ 189, 193 (Fed. Cir. 1983) (37 CFR 1.131 issue); Fitzgerald v. Arbib, 268 F.2d 763, 766, 122 USPQ 530, 532 (CCPA 1959) (Less than 1 month of inactivity during critical period. Efforts to exploit an invention commercially do not constitute diligence in reducing it to practice. An actual reduction to practice in the case of a design for a three-dimensional article requires that it should be embodied in some structure other than a mere drawing.); Kendall v. Searles, 173 F.2d 986, 993, 81 USPQ 363, 369 (CCPA 1949) (Diligence requires that applicants must be specific as to dates and facts.). The period during which diligence is required must be accounted for by either affirmative acts or acceptable excuses. Rebstock v. Flouret, 191 USPQ 342, 345 (Bd. Pat. Inter. 1975); Rieser v. Williams, 225 F.2d 419, 423, 118 USPQ 96, 100 (CCPA 1958) (Being last to reduce to practice, party cannot prevail unless he has shown that he was first to conceive and that he exercised reasonable diligence during the critical period from just prior to opponent's entry into the field); Griffith v. Kanamaru, 816 F.2d 624, 2 USPQ2d 1361 (Fed. Cir. 1987) (Court generally reviewed cases on excuses for inactivity including vacation extended by ill health and daily job demands,

and held lack of university funding and personnel are not acceptable excuses.); Litchfield v. Eigen, 535 F.2d 72, 190 USPQ 113 (CCPA 1976) (budgetary limits and availability of animals for testing not sufficiently described); Morway v. Bondi, 203 F.2d 741, 749, 97 USPQ 318, 323 (CCPA 1953) (voluntarily laying aside inventive concept in pursuit of other projects is generally not an acceptable excuse although there may be circumstances creating exceptions); Anderson v. Crowther, 152 USPQ 504, 512 (Bd. Pat. Inter. 1965) (preparation of routine periodic reports covering all accomplishments of the laboratory insufficient to show diligence); Wu v. Jucker, 167 USPQ 467, 472-73 (Bd. Pat. Inter. 1968) (applicant improperly allowed test data sheets to accumulate to a sufficient amount to justify interfering with equipment then in use on another project); Tucker v. Natta, 171 USPQ 494,498 (Bd. Pat. Inter. 1971) ("[a]ctivity directed toward the reduction to practice of a genus does not establish, prima facie, diligence toward the reduction to practice of a species embraced by said genus"); Justus v. Appenzeller, 177 USPQ 332, 340-1 (Bd. Pat. Inter. 1971) (Although it is possible that patentee could have reduced the invention to practice in a shorter time by relying on stock items rather than by designing a particular piece of hardware, patentee exercised reasonable diligence to secure the required hardware to actually reduce the invention to practice. "[I]n deciding the question of diligence it is immaterial that the inventor may not have taken the expeditious course....").

It is further noted that this statement pleading diligence is regarding Attorney diligence and does not indicate Engineering diligence. As noted above, even 2 days has been held to be fatal. This is in addition to the newly applied Marisetty reference that

has an earlier USC 102(a) date.

Applicant is reminded that Applicant has herein established conception. The critical period that must be accounted for through evidence of due diligence is the period from conception to just prior to the critical date(s).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gabriel L. Chu whose telephone number is (571) 272-3656. The examiner can normally be reached on weekdays between 8:30 AM and 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Scott Baderman can be reached on (571) 272-3644. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Gabriel L. Chu
Primary Examiner
Art Unit 2114

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